

No.

200100147



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

*Agriculture & Agri-Food Canada*

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE VARIETY. (34 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, DURUM

'AC Avonlea'

*In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this third day of December, in the year two thousand one.*

Attest:



*Paul M. Jabouh*

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*Earl C. Germain*

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the privacy Act of 1974 (5 U.S.C. 552a)

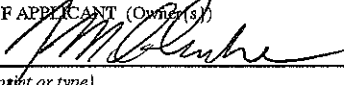
Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421) Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate ) <b>J.M. Clarke</b>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME <b>AC Avonlea</b>
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code ) <b>Semiarid Prairie Agricultural Research Centre Agriculture &amp; Agri-Food Canada Box 1030 Swift Current, Saskatchewan S9H 3X2</b>		5. TELEPHONE (include area code ) <b>306-778-7221</b>	PVPO NUMBER <b>200100147</b>
		6. FAX (include area code ) <b>306-773-9123</b>	
7. GENUS AND SPECIES NAME <b><u>Triticum turgidum L. var durum</u></b>	8. FAMILY NAME (Botanical) <b>Gramineae</b>		FILING AND EXAMINATION FEE <b>2450.00 + 255.00</b> DATE <b>3/29/01 4/10/01</b> CERTIFICATION FEE <b>320.00</b> DATE <b>9/28/01</b>
9. CROP KIND NAME (common name) <b>Hard Amber Durum Wheat</b>			
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (common name) <b>Canadian Department of Agriculture</b>			
11. IF INCORPORATED, GIVE STATE OF INCORPORATION		12. DATE OF INCORPORATION	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS <b>J.M. Clarke Semiarid Prairie Agricultural Research Centre Agriculture and Agri-Food Canada Box 1030; Swift Current, Saskatchewan Canada S9H3X2</b>			14. TELEPHONE (include area code )  15. FAX (include area code )
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (follow instructions on reverse)			
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Applicant's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds, or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to PVPO)			
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input checked="" type="checkbox"/> YES (if "yes", answer items 18 and 19 below) <input type="checkbox"/> NO (if "no", go to item 20)			
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED			
19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDERS SEED?			
20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES (if "YES", give names of countries and dates) Canada; Breeder Seed sold April 1997. <input type="checkbox"/> NO			

21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT (Owner(s)) 		SIGNATURE OF APPLICANT (Owner(s))	
NAME (Please print or type) <b>J.M. CLARKE</b>		NAME (Please print or type)	
CAPACITY OR TITLE <b>Wheat Breeder</b>	DATE <b>January 15, 2001</b>	CAPACITY OR TITLE	DATE

## *Exhibit A.*

### *Origin and Breeding History of AC Avonlea*

AC Avonlea was selected from the cross 8267-AD2A/DT612 made in 1987. The parent 8267-AD2A derives from the cross DT379/DT367, and DT612 derives from the cross DT367/Medora. DT367 (PI54060) is S-017/Wascana//7168, wherein S-017 is an introduction from CIMMYT and 7168 is a selection from an F1 diallelle introduced from the University of Manitoba. DT 379 (D6676/Quilafen) is a breeding line from the University of Saskatchewan, wherein D6676 is a breeding line introduced from North Dakota State University and Quilafen is a cultivar introduced from Chile. AC Avonlea was developed using a modified pedigree technique. The F<sub>2</sub> was grown as individual plants in a leaf and stem rust epiphytotic nursery at Swift Current in 1988. The F<sub>3</sub>, F<sub>5</sub> and F<sub>7</sub> generations were grown as head rows in a winter nursery near Brawley, California to produce seed for yield tests. Two replicate F<sub>4</sub>, F<sub>6</sub> and F<sub>8</sub> yield trials were grown near Swift Current and Regina in 1989 through 1991 and selected for agronomic performance, disease resistance and quality (protein, pigment, gluten strength). Leaf and stem rust reactions were assessed in hill plots in the F<sub>4</sub>, F<sub>6</sub> and F<sub>8</sub> generations in a leaf and stem rust epiphytotic nursery near Glenlea, Manitoba. The stem rust races used included QTH, TPM, TMR, RHT, and RKQ. The races of leaf rust used were those multiplied from collections made the previous year (Kolmer 1994). Races T26, T32 and T33 of loose smut and races L1, L16, T1, T6, T13 and T19 of common bunt were used for screening of the Durum Cooperative Test entries. The race designations are those described by Roelfs and Martens (1988) for stem rust, Long and Kolmer (1989) for leaf rust, Hoffmann and Metzger (1976) for common bunt, and Nielsen (1987) for loose smut.

AC Avonlea was evaluated in the Durum Western 'A' Test (five locations) in 1992, in the Durum 'B' Test (six locations) in 1993, and as DT 661 in the Durum Cooperative Test in 1994-1996. Two hundred and fifty uniform plants were selected from an F<sub>6</sub>-derived F<sub>11</sub> single plant progeny row grown at Swift Current in 1994. One-hundred and forty-four of these were grown in 3-m progeny rows at Swift Current in 1995, and 131 of these were

grown in 15-m rows at Indian Head, SK in 1996 and bulked to produce Breeder seed

AC Avonlea is uniform and stable as observed during eight generations since 1992. A low frequency of short (1 in 6400), tall (1 in 7200), black awned (1 in 18,000), bronze chaff (1 in 60,000), and awnless (1 in 90,000) plants were rogued from the 1996 Breeder seed increase. Up to 1% variant plants may be encountered in subsequent generations.

***Exhibit B.***  
***Statement of Distinctness***

AC Avonlea is similar to the hard amber durum wheat 'AC Navigator'. However, it can be distinguished by the following morphological characteristics:

- AC Avonlea has an inclined head curvature (Berthoud, Colorado and Ft. Collins, Colorado 2000). AC Navigator has an erect head curvature (Berthoud, Colorado and Ft. Collins, Colorado 2000).
- AC Avonlea has medium length brush hairs on the tip of the seed (Berthoud, Colorado and Ft. Collins, Colorado 2000). AC Navigator has short hairs on the tip of the seed (Berthoud, Colorado and Ft. Collins, Colorado 2000).
- AC Avonlea has white awns (Berthoud, Colorado and Ft. Collins, Colorado 2000). AC Navigator expresses black tipped awns.
- AC Avonlea is a standard height hard amber durum variety. AC Navigator is a semidwarf hard amber durum.
- AC Avonlea has a long glume length (Berthoud, Colorado and Ft. Collins, Colorado 2000). AC Navigator has a narrow to mid-wide glume width (Berthoud, Colorado and Ft. Collins, Colorado 2000).

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE DIVISION  
BELTSVILLE, MARYLAND 20705

EXHIBIT C  
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY  
WHEAT (*Triticum* Spp.)

NAME OF APPLICANT(S) <b>J.M. Clarke</b>	FOR OFFICIAL USE ONLY PVPO NUMBER <b>200100147</b>
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) <b>Semiarid Prairie Agricultural Research Centre Box 1030; Swift Current, Saskatchewan S9H 3X2</b>	NAME OR EXPERIMENTAL DESIGNATION <b>AC Avonlea</b>

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in the first box when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized standard may be used to determine plant colors; designate system used.

Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

1=Common 2=Durum 3=Club 4=Other (specify) \_\_\_\_\_

2. VERNALIZATION:

1=Spring 2=Winter 3=Other (specify) \_\_\_\_\_

3. COLEOPTILE ANTHOCYANIN:

1=Absent 2=Present

4. JUVENILE PLANT GROWTH:

1=Prostrate 2=Semi-erect 3=Erect

5. PLANT COLOR (boot stage):

1 = Yellow-Green 2 = Green 3 = Blue-Green

6. FLAG LEAF (boot stage):

1 = Erect 2 = Recurved

1 = Not Twisted 2 = Twisted

7. EAR EMERGENCE:

Number of Days Earlier Than Kyle \*

Number of Days Later Than \_\_\_\_\_ \*

8. ANTHER COLOR:

1 = YELLOW 2 = PURPLE

9. PLANT HEIGHT (from soil to top of head, excluding awns):

cm Taller Than \_\_\_\_\_ \*

cm Shorter Than Kyle \*

\* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

## 10. STEM:

## A. ANTHOCYANIN

**1** 1= Absent 2=Present

## B. WAXY BLOOM

**2** 1=Absent 2=Present

C. HAIRINESS (*last internode of rachis*)

**1** 1=Absent 2=Present

D. INTERNODE (*specify number*)

**1** 1=Hollow 2=Semi-solid 3=Solid

## E. PEDUNCLE

**1** 1=Erect 2=Recurved

**3 6** cm Length

11. HEAD (*at Maturity*):

## A. DENSITY

**3** 1=Lax 2=Middense 3= Dense

## B. SHAPE

**2** 1 = Tapering 2= Strap 3 = Clavate 4 = Other (*specify*)

## C. CURVATURE

**2** 1 = Erect 2 = Inclined 3 = Recurved

## D. AWNEDNESS

**4** 1 = Awnless 2 = Apically Awnletted 3 = Awnletted 4 = Awned

12. GLUMES (*at Maturity*):

## A. COLOR

**1** 1 = White 2 = Tan 3 = Other (*specify*)

## B. SHOULDER

**2** 1 = Wanting 2 = Oblique 3 = Rounded 4 = Square 5 = Elevated 6 = Apiculate

## C. BEAK

**3** 1 = Obtuse 2 = Acute 3 =Acuminate

## D. LENGTH

**3** 1 = Short (ca. 7mm) 2 = Medium (ca. 8mm) 3 = Long (ca. 9mm)

## E. WIDTH

**3** 1 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm) 3 = Wide (ca. 4mm)

## 13. SEED:

## A. SHAPE

**3** 1 = Ovate 2 = Oval 3 = Elliptical

## B. CHEEK

**2** 1=Rounded 2=Angular

## C. BRUSH

**2** 1=Short 2=Medium 3=Long

**1** 1 = Not Collared 2 = Collared

## D. CREASE

**2** 1 = Width 60% or less of Kernel  
2 = Width 80% or less of Kernel  
3 = Width Nearly as Wide as Kernel

**2** 1 = Depth 20% or less of Kernel  
2 = Depth 35% or less of Kernel  
3 = Depth 50% or less of Kernel

## 13. SEED: (continued)

## E. COLOR

☒ 2 1 = White 2 = Amber 3 = Red 4 = Other (specify) \_\_\_\_\_

## F. TEXTURE

☒ 1 1=Hard 2=Soft

## G. PHENOL REACTION (see instructions):

☒ 0 1 = Ivory 2 = Fawn 3 = Light Brown 4 = Dark Brown 5 = Black

## 14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

<input checked="" type="checkbox"/> 2 Stem Rust ( <i>Puccinia graminis</i> f. sp. <i>tritici</i> ) Field races QTH, TPM, TMR, RHT, RKQ	<input checked="" type="checkbox"/> 2 Leaf Rust ( <i>Puccinia recondita</i> f. sp. <i>tritici</i> ) Field races
<input checked="" type="checkbox"/> 0 Stripe Rust ( <i>Puccinia striiformis</i> )	<input checked="" type="checkbox"/> 1 Loose Smut ( <i>Ustilago tritici</i> )
<input checked="" type="checkbox"/> 3 Tan Spot ( <i>Pyrenophora tritici-repentis</i> )	<input checked="" type="checkbox"/> 0 Flag Smut ( <i>Urocystis agropyri</i> )
<input checked="" type="checkbox"/> 0 Halo Spot ( <i>Selenophoma donacis</i> )	<input checked="" type="checkbox"/> 2 Common Bunt ( <i>Tilletia tritici</i> or <i>T. laevis</i> )
<input checked="" type="checkbox"/> 0 <i>Septoria nodorum</i> (Glume Blotch)	<input checked="" type="checkbox"/> 0 Dwarf Bunt ( <i>Tilletia controversa</i> )
<input checked="" type="checkbox"/> 0 <i>Septoria avenae</i> (Speckled Leaf Disease)	<input checked="" type="checkbox"/> 0 Karnal Bunt ( <i>Tilletia indica</i> )
<input checked="" type="checkbox"/> 0 <i>Septoria tritici</i> (Speckled Leaf Blotch) Field races	<input checked="" type="checkbox"/> 0 Powdery Mildew ( <i>Erysiphe graminis</i> f. sp. <i>tritici</i> ) Field races
<input checked="" type="checkbox"/> 0 Scab ( <i>Fusarium</i> spp.)	<input checked="" type="checkbox"/> 0 Snow Molds
<input checked="" type="checkbox"/> 0 Black Point (Kernel Smudge)	<input checked="" type="checkbox"/> 0 Common Root Rot ( <i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.)
<input checked="" type="checkbox"/> 0 Barley Yellow Dwarf Virus (BYDV)	<input checked="" type="checkbox"/> 0 Rhizoctonia Root Rot ( <i>Rhizoctonia solani</i> )
<input checked="" type="checkbox"/> 0 Soilborne Mosaic Virus (SBMV) Field races	<input checked="" type="checkbox"/> 0 Black Chaff ( <i>Xanthomonas campestris</i> pv. <i>translucens</i> )
<input checked="" type="checkbox"/> 0 Wheat Yellow (Spindle Streak) Mosaic Virus Field races	<input checked="" type="checkbox"/> 0 Bacterial Leaf Blight ( <i>Pseudomonas syringae</i> pv. <i>syringae</i> )
<input checked="" type="checkbox"/> 0 Wheat Streak Mosaic Virus (WSMV) Field races	<input type="checkbox"/> Other (specify) _____
<input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Other (specify) _____
<input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Other (specify) _____
<input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Other (specify) _____



15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

<input checked="" type="checkbox"/> 0	Hessian Fly ( <i>Mayetiola destructor</i> )	<input type="checkbox"/>	Other (specify)
<input checked="" type="checkbox"/> 1	Stem Sawfly ( <i>Cephus</i> spp.)	<input type="checkbox"/>	Other (specify)
<input checked="" type="checkbox"/> 0	Cereal Leaf Beetle ( <i>Oulema melanopa</i> )	<input type="checkbox"/>	Other (specify)
<input checked="" type="checkbox"/> 0	Russian Aphid ( <i>Diuraphis noxia</i> )	<input type="checkbox"/>	Other (specify)
<input checked="" type="checkbox"/> 0	Greenbug ( <i>Schizaphis graminum</i> )	<input type="checkbox"/>	Other (specify)
<input checked="" type="checkbox"/> 0	Aphids		

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

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***Exhibit D.***  
***Additional Description of AC Avonlea***

AC Avonlea durum wheat was developed at the Agriculture and Agri-Food Canada Semiarid Prairie Agricultural Research Centre, Swift Current, Saskatchewan, by the Arid Prairie Wheat Program. AC Avonlea is a strong strawed standard height durum which combines high yield with high grain protein concentration. AC Avonlea has good resistance to leaf and stem rust.

Juvenile growth habit is erect. Plant color at boot stage is blue-green. Flag leaf at boot stage is recurved and twisted. Waxy bloom is present on the head, stem and flag leaf sheath. Head shape is strap and awned. Glumes are glabrous, wide in width and long in length with oblique shoulders and short acuminate beaks. Seed shape is elliptical. Brush hairs are medium in length. Seed crease depth is middeep and width is midwide. Seed cheeks are angular.

AC Avonlea is adapted to the durum production area of the northern Great Plains.

Table 1. Agronomic performance of AC Avonlea in comparison to Belzer, Ben, Munich, and Plaza at nine locations (four in North Dakota, two in Montana, one in Minnesota, and one in South Dakota) in 1999 (extracted from 1999 Uniform Regional Durum Wheat Nursery report, E. Elias, S. Stancyk, and G. Johnson).

	Yield	Test Weight	Thousand Kernel Weight	Height	Leaf Dis.	Scab
	(kg/ha)	(kg/hL)	(g)	(cm)		
AC Avonlea	3449	72.8	33.2	102	4.4	5.3
Belzer	3496	71.8	36.2	94	4.7	3.8
Ben	3369	75.0	36.3	94	3.0	6.0
Munich	3725	73.8	33.2	85	3.1	6.3
Plaza	3543	72.5	32.1	75	2.8	5.0
Isd.05	235	1.0	2.4	6.7	1.2	1.3

Table 2. Quality of AC Avonlea in comparison to Belzer, Ben, Munich, and Plaza at five North Dakota locations in 1999 (data courtesy of E. Elias, North Dakota State University)

	Wheat Protein	Vitreous Kernels	Semolina Extraction	Semolina Protein	Semolina Colour	Mixograph Pattern
	(%)	(%)	(%)	(%)	(ppm)	
AC Avonlea	15.1	92	60.0	14.1	9.2	5.2
Belzer	14.2	92	59.7	13.3	8.7	6.6
Ben	14.5	92	61.7	13.6	8.9	5.6
Munich	13.8	88	60.9	13.0	9.5	4.4
Plaza	13.7	86	60.1	12.9	8.7	5.2
Isd.05	0.9	8.8	1.7	0.9	0.7	1.1

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

# EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S)  J.M. Clarke	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME  AC Avonlea
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)  Semiarid Prairie Agricultural Research Centre Agriculture and Agri-Food Canada Box 1030 Swift Current, Saskatchewan S9H 3X2	5. TELEPHONE (include area code)  306-778-7221	6. FAX (include area code)  306-773-9123
7. PVPO NUMBER  200100147		
8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain.  <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		

Applicant signing on behalf of Agriculture and Agri-Food Canada

9. Is the applicant (individual or company) a U.S. national or U.S. based company? If no, give name of country	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
10. Is the applicant the original owner?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no, please answer one of the following:
a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?  <input type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country	
b. If original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?  <input type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country	

11. Additional explanation on ownership (if needed, use reverse for extra space):

\*\*Please see following page.

## PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

***Exhibit E.***  
***Statement of the Basis of Applicant's Ownership***

John M. Clarke developed the variety (AC Avonlea) for which Plant Variety Protection is hereby sought. John M. Clarke performed this work in its entirety as an employee of Agriculture and Agri-Food Canada. As such, all rights to any invention, discovery, or development made by John M. Clarke are assigned to the Agriculture and Agri-Food Canada on behalf of Her Majesty the Queen in Right of Canada, with no rights of any kind pertaining to AC Avonlea being retained by John M. Clarke.

The rights to AC Avonlea were licenced to Quality Assured Seeds Inc. in April, 1997.